



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/748,700	12/22/2000	Richard Schubert	A0312/7388/MXS	4554

7590 05/03/2004
Randy J. Pritzker
Wolf, Greenfield & Sacks, P.C.
600 Atlantic Avenue
Boston, MA 02210

EXAMINER

TRAN, KHAI

ART UNIT PAPER NUMBER

2631

DATE MAILED: 05/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/748,700

Applicant(s)

SCHUBERT ET AL.

Examiner

KHAI TRAN

Art Unit

2631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4 and 5.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:
Page 16, line 23, the term numerical element "312" should be --308--.
Appropriate correction is required.

Claim Objections

2. Claims 20-21 are objected to because of the following informalities:
Appropriate correction is required.
Regarding claim 20, line 1, the term "claim 14" should be --claim 19--.
Regarding claim 21, line 1, the term "claim 14" should be --claim 19--.

Claim Rejections - 35 USC § 112

3. Claims 1-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1-25, the recitations of the claims such as only an all digital loop circuit (claim 1), a loop circuit (claim 6), a device (claim 19), a sample rate converter (claims 22, 23, 24). Such claims, consequently, are considered as single means since the means does not seem to appear in combination with another recited element of means. Consequently, such claims are held nonenabling. See MPEP 2164.08(a).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claim 1-18, 26-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Wilson et al (U.S. Pat. 5,625,359).

Regarding claims 1-3, Wilson et al disclose an all-digital loop circuit to control a clock rate of a digital circuit element to be a function of a frequency of a signal received by the communication circuit as shown in Figure 2 (showing a digital loop circuit comprising an ADC (32), a digital filter circuit (a filter 36, a decimator 40), a sample rate control circuit for controlling the sample rate of the output data stream, see col. 4, line 6 to col. 5, line 63).

Regarding claim 4, Wilson et al disclose the analog-to-digital converter operating at a fixed clock rate and the decimation filter operating at a variable clock rate (col. 4, line 27 to col. 5, line 63).

Regarding claim 5, Wilson et al disclose a loop circuit to control a sample rate of the digital circuit element as shown in Figure 2 (see col. 4, line 6-42).

Regarding claims 6-7, Wilson et al disclose wherein the loop circuit comprises a digital loop circuit as shown in Figure 2 (a digital loop circuit comprising an ADC (32), a digital filter circuit (a filter 36, a decimator 40), a sample rate control circuit).

Art Unit: 2631

Regarding claim 8, Wilson et al disclose wherein the digital circuit element receives an input sampled data stream and provides an output sampled data stream, and wherein the loop circuit controls the sample rate of the output data stream as shown in Figure 2, (a digital loop circuit comprising an ADC (32), a digital filter circuit (a filter 36, a decimator 40), a sample rate control circuit for controlling the sample rate of the output data stream, see col. 4, line 27 to col. 5, line 63).

Claims 9, 14 are similar to claim 1. Therefore, claims 9, 14 are rejected under a similar rationale.

Claims 10-13 are similar to claims 2-5. Therefore, claims 10-13 are rejected under a similar rationale.

Claims 15-18 are similar to claims 2-5. Therefore, claims 15-18 are rejected under a similar rationale.

Claims 26-28 are similar to claims 1-5. Therefore, claims 26-28 are rejected under a similar rationale.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claim 23 is rejected under 35 U.S.C. 102(b) as being anticipated by Demmer (U.S. Pat. 5,621,478).

Regarding claim 23, Demmer discloses a phase locked loop comprising a sample rate converter (col. 3, lines 22-37, disclosing the phase locked loop having the sample rate converter).

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 22, 24-25, 19-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Dilling et al (U.S. Pat. 6,163,685).

Regarding claim 22, Dilling et al disclose a clock recovery circuit comprising a sample rate converter (81) (see Figure 1 comprising a sample rate converter 26, and see col. 6, lines 22-46).

Regarding claims 24-25, Dilling et al disclose a device comprising at least one sample rate converter that receives a sampled data stream and outputs two separate data stream having output sample rates that are independent of one another (see Figure 1 having a sample rate converter (26) for generating two output signals.

Regarding claims 19-21, Dilling et al disclose a device that receives two or more sampled data stream having sample rates different from one another, converts the sample rate of one or more of the data stream to provide two or more data stream

Art Unit: 2631

having sample rates compatible with one another, and combines the two data streams (see Figure 1).

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Adams (U.S. Pat. 5,638,010) discloses a digitally controlled oscillator.

Hinckley, Jr. (U.S. Pat. 6,049,302) discloses a pulsed doppler radar system.

Reber (U.S. Pat. 6,393,070) discloses a digital communication device and a mixer.

Byrne et al (U.S. Pat. 6,487,672) disclose a digital timing recovery using baud rate sampling.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KHAI TRAN whose telephone number is (703) 305-1876. The examiner can normally be reached on 7:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammed Ghayour can be reached on (703) 306-3034. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2631

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



KHAI TRAN
Examiner
Art Unit 2631

KT
April, 28 2004